



APPLICATION FOR A COASTAL ZONE ACT STATUS DECISION

**State of Delaware
Department of Natural Resources & Environmental Control
Office of the Secretary**

February 7, 2017
4 Autoclave &
Associated
Equipment
Replacement
Project
Croda Inc

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CZA Status Decision Application Instructions

1. Complete all parts of the application. For questions which are not applicable to your project, do not leave blank; present a statement that clearly states why the section is not applicable to your project.
2. Because all applicants' projects are different, this word document template will provide you flexibility for needed space to answer the questions. Please insert additional lines for text where needed for your application. If appropriate, attach extra pages referencing each answer by the corresponding question number.
3. Submit eight complete hard copies of the application to:

State of Delaware
Department of Natural Resources & Environmental Control
Office of the Secretary
89 Kings Highway
Dover, DE 19901

In addition to the eight hard copies, submit a complete electronic "pdf" copy of the permit application on cd-rom.

4. Comply, if required, or as requested by the DNREC Secretary, with [7 Delaware Code, Chapter 79, Section 7902](#). If requested, but not completed, your application will not be considered administratively complete until this form is reviewed.
5. Be sure to include your permit application fee of \$3,000; otherwise the application will not be considered administratively complete. Make checks payable to the "State of Delaware."
6. Be advised that the application for a Delaware Coastal Zone Act Status Decision is a public document, which may be displayed at DNREC offices, public libraries, and the web, among others. If this application requires you to place confidential information or data in the application to make it administratively complete, note the Delaware Freedom of Information Act ([29 Delaware Code, Chapter 100](#)) and [DNREC's Freedom of Information Act Regulation](#), Section 6 (Requests for Confidentiality), for the proper procedure in requesting confidentiality.

Note: This application template was last revised by DNREC on August 31, 2007. Please discard any previous versions.

PART 1

CERTIFICATION BY APPLICANT

Under the penalty of perjury pursuant to 11 Delaware Code §1221-1235, I hereby certify that all the information contained in this Delaware Coastal Zone Act Status Decision Application and in any attachments is true and complete to the best of my belief.

I hereby acknowledge that all information in this application will be public information subject to the Delaware Freedom of Information Act, except for clearly identified proprietary information agreed to by the Secretary of the Department of Natural Resources & Environmental Control.

Chris Barnett on behalf of Croda Inc
Print Name of Applicant

Signature of Applicant

Site Director
Title

Date

PART 2

APPLICANT INFORMATION AND SITE IDENTIFICATION

2.1 Identification of the applicant:

Company Name: **Croda Inc**

Address: **315 Cherry Lane, New Castle DE 19720**

Telephone:

302-429-

5599

Fax: 302-

429-

2.2 Primary contact: Please list the name, phone number and email of a preferred contact within your company in case the DNREC needs to contact you regarding this status decision. **Robert J. Touhey 302-429-5269 robert.touhey@croda.com**

2.3 Site of proposed project (if different than above): **same**

2.4 Authorized agent (if any):

Name:

Address:

Telephone:

Fax:

If you have an authorized agent for this status decision process, provide written authorization from client for being the authorized agent.

2.5 Is the applicant claiming confidentiality in any section of their application?

YES

NO

If yes, see instructions on page 3.

PART 3

PROJECT SUMMARY

Provide a one-page summary describing the proposed project or use. Include a brief quantitative description of any anticipated environmental impacts.

This project will replace and upgrade the existing 4 autoclave unit that was built in 1953. The deodorizer vessel that receives the reacted material from the autoclave to strip un-reacted materials built in 1966 will also be replaced along with some of the associated process equipment such as pumps and heat exchangers. The new units will be safer and more efficient, and while both will be higher capacity, they will not increase the emissions or overall environmental impact due to their design and operating methodology.

The proposed replacement 4 autoclave vessel is inherently safer because it is designed to withstand a higher pressure rating and represents industry best practice design standards. New ancillary equipment including pumps, piping and heat exchangers, will be installed to complete the modernization of the new autoclave.

The replacement vessels will be installed in a new structure within the existing facility footprint. A new electrical motor control center will be housed in an existing spare room near the proposed site and will also house a new automated process control system.

Attached are a plant layout (Attachment 1) showing the locations of the existing and proposed autoclaves within the facility, and a typical autoclave process flow diagram (Attachment 2) indicating the proposed replacement vessels

PART 4

PROJECT INFORMATION

- 4.1 Is the proposed project entirely or partly a new, or improved, or extended pier or other ship docking facility?

YES

NO

If yes, will it be used at least in part for bulk cargo transfers by the applicant?

YES

NO

If no, please explain what it will handle:

- 4.2 Is this project entirely for pollution control purposes?

YES

NO

- 4.3 Is this project a new research and development facility?

YES

NO

- 4.4 Is this project a new or expanding (flow rate) public sewage wastewater treatment plant?

YES

NO

- 4.5 Will the proposed project meet the following definition of “Manufacturing” as found in the [Coastal Zone Act](#): “Manufacturing means the mechanical or chemical transformation of organic or inorganic substances into new products, characteristically using power driven machines and materials handling equipment, and including establishments engaged in assembling component parts of manufactured products, provided the new product is not a structure or other fixed improvement.”

YES

NO

If no, explain what kind of activity will be carried out at this project site:

4.6 Will the project have the following equipment or facilities?

- | | | |
|-------------------------------------|------------|-----------|
| a. Smoke stacks | YES | <u>NO</u> |
| b. Tanks | <u>YES</u> | NO |
| c. Distillation or reaction columns | <u>YES</u> | NO |
| d. Chemical processing equipment | <u>YES</u> | NO |
| e. Scrubbing towers | YES | <u>NO</u> |
| f. Pickling equipment | YES | <u>NO</u> |
| g. Waste treatment lagoons | YES | <u>NO</u> |
| h. Smelters | YES | <u>NO</u> |
| i. Incinerators | YES | <u>NO</u> |

4.7 Will the project use 20 acres or more?

YES

NO

How many acres will it use? <0.25

4.8 Does this facility appear in Appendix B of the Coastal Zone Act Regulations (the list of the nonconforming uses)?

YES

NO

If no, proceed to question 4.11

4.9 Will the proposed activity described in this application occur entirely within the lines delineating the area of nonconformity for this site, as seen in the Appendices of the Regulations?

YES

NO

N/A

4.10 Will the proposed activity or use straddle this line?

YES

NO

N/A

If yes, describe what equipment, facilities, or machinery will be within the delineated area of nonconformity AND what will be outside of this area of nonconformity:

- 4.11 Is the proposed project or use part of a manufacturing use that was in operation prior to and on June 28, 1971?

YES

NO

- 4.12 Has this facility ever been granted a Coastal Zone Act Permit?

YES

NO

If yes, please provide the following information:

Applicant Name	Permit Number	Date Issued
Croda Inc	393	2/28/12
Croda Inc	398	4/8/14
Croda Inc	417	4/6/15

- 4.13 Does the new or expanded use involve any change in existing:

a. processes? YES **NO**

b. facilities? YES **NO**

c. buildings? YES **NO**

d. emissions discharge? YES **NO**

If yes, please explain each in detail. Use the following tables to help describe any new or changed air or water emissions: **The project involves replacement of existing vessels that utilize the same chemical manufacturing principles.**

Air Emissions – NOTE emissions listed are actual emissions not permit limits

Pollutant	Existing Emissions		Net Increase/Decrease		New Total Emissions		Percent Change (compare tons/year)
	Lbs/day	Tons/year	Lbs/day	Tons/year	Lbs/day	Tons/year	
VOC		2.2		0			0
EO		1.0		0			0
PO		0.1		0			0
dioxane		0.7		0			0

Water emissions

Pollutant	Current Discharge Concentration (ppm)	New or Changed Discharge Concentration	Current Discharge		Net Increase/Decrease		New Total Emissions	
			Lbs/day	Tons/year	Lbs/day	Tons/year	Lbs/day	Tons/year
process wastewater is not sampled or metered separately							No increase	

- 4.14 Will this project directly or indirectly increase plant production over present capacity?

YES

NO

If yes, explain in what way and by how much: **The vessels are larger and will increase production capacity by approximately 6,000 metric tons.**

- 4.15 Will this project result in the production of any new products, either directly or indirectly, at this facility?

YES

NO

If yes, list each new product: **New products are a possibility as they are developed to meet customer needs but they are not defined at this time. Any new products will be in the same general chemical families that are currently produced.**

- 4.16 List materials and/or ingredients to be utilized by this proposed project and how they will be transported to the site. **Ethylene oxide (EO) and propylene oxide (PO) are the primary reactants. They will be reacted with a wide variety of substrates depending upon the desired final product. Initially, EO will be transported by rail but eventually it will be delivered by pipeline from an EO plant within the existing facility. PO will be transported by rail.**

PART 5

PROJECT SITE AND ZONING

- 5.1 In a separate attachment, provide a map of appropriate scale to clearly show the site. Mark important natural features and project buildings and processing equipment of the proposed project such as roads, wetlands, railway sidings, drainage ways, tanks, sewer systems, water mains, wells, etc.

See enclosed site plot plan of the site (Attachment 1).

- 5.2 What is the current SIC code for the proposed use?
2869

- 5.3 What is the current zoning and planned land use of the proposed project site? **Zoning is Heavy Industrial (HI). Proposed use is chemical manufacturing.**

- 5.4 Will the proposed project require a zoning change?
YES
NO

If yes:

A. To what classification will it be changed?

B. What zoning authority is responsible for reviewing and approving the change?

- 5.5 Will this project require new supporting facilities?
YES
NO

If yes, describe each facility, and how it will be used:

PART 6

PROJECT DESCRIPTION AND PROJECT IMPACTS

- 6.1 On a separate attachment labeled “**Project Description**,” provide a concise but complete description of the proposed project or use. Be sure to answer the following questions:
- How does the project relate to any existing manufacturing operations and facilities (if this is not for an entirely new manufacturing plant)?
 - What effects will there be, if any, on land use acreage, manufacturing production capacity, modification of current product line(s), and safety risks to the public and to company employees?
 - Is this project or use a complete, single project, or is it part of a long-term, large-scale project that has other components to it that may need approval under the Coastal Zone Act at a later date?
 - If it is part of a larger project, describe the entire project in detail and mention ALL major machinery, facilities, land, products, and processes involved.
- 6.2 On a separate attachment labeled “**Environmental Impacts**,” provide a detailed and accurate impact analysis that describes the proposed project’s impacts on:
- air quality
 - local surface and ground water quality
 - surface and groundwater withdrawals
 - habitat loss
 - solid and hazardous waste generation
 - noise
 - odors
 - local aesthetic quality
 - any other notable factors not listed above
 - Provide a detailed statement describing the proposed project’s potential to pollute should equipment malfunction or human error occur, including a description of backup controls, backup power, and safety provisions.
- 6.3 On a separate attachment labeled “**Other Project Impacts**,” provide a detailed and accurate analysis on how the proposed project will impact each of the following (include both positive and negative impacts):
- the economy (corporate, state, county)
 - county and municipal comprehensive plans/ zoning
 - effect upon neighboring land uses
 - the impacts, if any, that *supporting facilities* will have on: the environment; economics of the area; zoning; neighboring land uses; and aesthetic quality.

Project Description

(Refer to Question 6.1)

- a. How does the project relate to any existing manufacturing operations and facilities (if this is not for an entirely new manufacturing plant)?

This project is a replacement for existing units that are over 50 years old and are at the end of their service life.

- b. What effects will there be, if any, on land use acreage, manufacturing production capacity, modification of current product line(s), and safety risks to the public and to company employees?

This project will be constructed within the existing plant footprint. It will increase production capacity of existing products by approximately 6,000 metric tons. The new units will be rated for higher pressure and will be inherently safer than existing equipment.

- c. Is this project or use a complete, single project, or is it part of a long-term, large-scale project that has other components to it that may need approval under the Coastal Zone Act at a later date?

This is a single project.

- d. If it is part of a larger project, describe the entire project in detail and mention ALL major machinery, facilities, land, products, and processes involved.

N/A

Environmental Impacts

(Refer to Question 6.2)

Describe the proposed project's impacts on:

- a. air quality
No increase
- b. local surface and ground water quality
None
- c. surface and groundwater withdrawals
No increase
- d. habitat loss
None
- e. solid and hazardous waste generation
No increase
- f. noise
No change
- g. odors
None
- h. local aesthetic quality
None
- i. any other notable factors not listed above
None
- j. Provide a detailed statement describing the proposed project's potential to pollute should equipment malfunction or human error occur, including a description of backup controls, backup power, and safety provisions.
This project will reduce the potential to pollute because the autoclave and deodorizer will be higher pressure rated vessels than the existing vessels. The autoclave vessel will be able to contain a deflagration should equipment malfunction or human error occur thereby eliminating a potential release of EO and/or PO to atmosphere. New automated control systems will also reduce the chance of human error.
New heat exchangers will be more efficient than the existing units improving energy efficiency.
The system will also have UPS back-up power capable of providing sufficient time to stabilize the process should a power outage occur.

Other Project Impacts

(Refer to Question 6.3)

Describe how the proposed project will impact each of the following (include both positive and negative impacts):

- a. the economy (corporate, state, county)

The project is expected to have a temporary positive impact on the state and local economy by the wages and associated taxes that will be paid to various trades involved in the construction of the project.

- b. county and municipal comprehensive plans/ zoning

No impact is expected because it will be constructed within the existing footprint of the facility and complies with the site current zoning.

- c. effect upon neighboring land uses

No impact because the project is a replacement of some existing equipment within the facility fence line.

- d. the impacts, if any, that *supporting facilities* will have on: the environment; economics of the area; zoning; neighboring land uses; and aesthetic quality.

N/A

END OF APPLICATION

ATTACHEMENTS TO FOLLOW